

III. Remarks

Claims 1-7, 9-17, 19-21, and 34 are pending and rejected. With the remarks provided below, Applicants respectfully request reconsideration and a withdrawal of all rejections.

Objections to the Drawings

The Examiner has objected to Figure 5b for including new matter. More specifically, the Examiner has stated that the depiction of angle 51 is new matter because it can not be clearly seen or inferred from any of Applicant's figures or Specification.

Applicants respectfully assert that the angle 51 is not new matter, and that Paragraph [0013] and Figure 2 of the original Application as filed disclose the angle 51 between the end face 50 and the inner surface 32. More specifically, Paragraph [0013] discloses that the "pinion includes an inner surface which is disposed about the shaft" and that "the starter pinion 'sweeps' or moves undesired particles from the output shaft to 'clean' the shaft", thus disclosing that the pinion inner surface 32 and the shaft 14 engage each other. Figure 2 shows the pinion 12 engaged with the shaft 14 such that the end face 50 (labeled in Figure 3 of the original Application as filed) forms a shaft/end face angle, which is drawn in Figure A below (a marked-up version of Figure 2 of the original Application as filed that is included for illustrative purposes only).

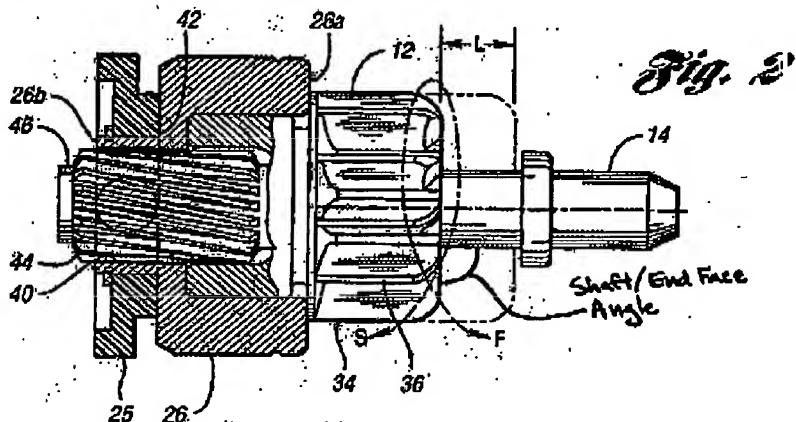


Figure A -- Applicant's Marked-up Figure 2
from the original Application as filed

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The shaft/end face angle can be physically measured via examination of Figure 2, resulting in the determination that the shaft/end face angle is generally equal to 90 degrees. In other words, Figure 2 discloses that the shaft 14 and end face 50 are generally perpendicular to each other. Furthermore, because the shaft 14 and the pinion inner surface 32 engage each other, the pinion inner surface 32 and the end face 50 form an inner surface/end face angle that is the complimentary angle to the shaft/end face angle. Therefore, the inner surface/end face angle is determined by the following formula: [inner surface/end face angle] = $180^\circ - [\text{shaft/end face angle}]$. After inserting the above-determined value for the shaft/end face angle, the inner surface/end face angle is equal to $180^\circ - [\text{approximately } 90^\circ] \approx 90^\circ$.

Although the angle 51 shown in Figure 5b was not labeled in any of the original figures, it can be clearly seen and inferred from Paragraph [0013] and Figure 2 of the original Application as filed. Therefore, by labeling the angle formed between the end face 50 and the pinion inner surface 32 as angle 51 Applicants have not added new matter.

Amendments to the Specification

The Examiner has objected to Paragraph [0019] for including new matter. More specifically, the Examiner has stated that the exact measurement of angle 51 is new matter.

Paragraph [0019] has been amended to further clarify the description of angle formed by the inner surface 32 and the end face 50 by reciting that the respective portions are *substantially perpendicular to each other, as shown by angle 51 defined between the inner surface 32 and the end face 50*. As discussed above with respect to the objections to the drawings, the pinion inner surface 32 and end face 50 are disclosed as being generally perpendicular to each other in Paragraph [0013] and Figure 2 of the original Application as filed. Therefore, no new matter is added.

Furthermore, despite the above-described disclosure in the original Application as filed regarding the approximate numerical value of the inner surface/end face angle, Paragraph [0019] has been amended to delete the specific numerical angle (90 degrees) of angle 51. However, Applicants respectfully assert that the approximate numerical value of the angle (90 degrees) can be ascertained



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by measuring the angle between the pinion end face 50 and the shaft 14 and subtracting the value from 180 degrees.

The Examiner has also objected to the previous amendment of Paragraph [0020] that the secondary edges 56 are *circumferentially* formed along the end face 50 as new matter. Applicants have not changed the meaning of the description of the location of the secondary edges 56, but have merely clarified the description. The phrase "radially formed along", in light of Figure 3 in the original Application as filed, should be interpreted to mean that the secondary edge 56 is formed around an axis at a constant radius. Similarly, the phrase "circumferentially formed along the end face 50" should be interpreted to mean that the secondary edge 53 is formed along an edge of the end face 50, as shown in Figure 3 of the original Application as filed. Thus, the two terms "radially" and "circumferentially" are interpreted to have the same meaning, as shown in Figure 3, with "circumferentially" being more accurate. Therefore, Applicants respectfully assert that no new matter has been added by the previous amendment of Paragraph [0020].

Claim Rejections – 37 U.S.C. § 102(b)

Responsive to the rejections of claim 1-7, 9-17, 19-21, and 34 under 35 U.S.C. § 102(b), *Johnston* fails to teach each and every element of a device as claimed in the present Application.

The Examiner referenced a pink highlighted portion in her marked-up figures of the *Johnston* reference, but Applicants received only a black-and-white copy of the Examiner's marked-up drawing. Furthermore, the Legend in the lower-left corner of the marked-up drawing does not include an indicator, such as a symbol or a color, for the end face. Therefore, Applicants cannot accurately determine which surfaces the Examiner is interpreting to be an end face and a secondary edge. Applicants will attempt to address all of the possible interpretations of the marked-up drawing.

Claim 1 recites that the inner surface is terminating at an end face of the pinion and that the inner surface and the end face are perpendicular with each other and that they define a secondary edge. Therefore, claim 1 recites that a first surface (the inner surface) and a second surface (the end face) cooperate to define an edge.

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Furthermore, these two surfaces (inner surface and end face) are recited as being perpendicular to each other.

Johnston does not disclose an inner surface extending to a perpendicular end face in order to form a secondary edge. The inner surface 24 in *Johnston* does not extend to the end face (labeled in the marked-up Figure B below, which is included for illustrated purposes only) because the inner surface 24 terminates at the inner chamfer edge (labeled below in Figure B) of the chamfer face (labeled below in Figure B).

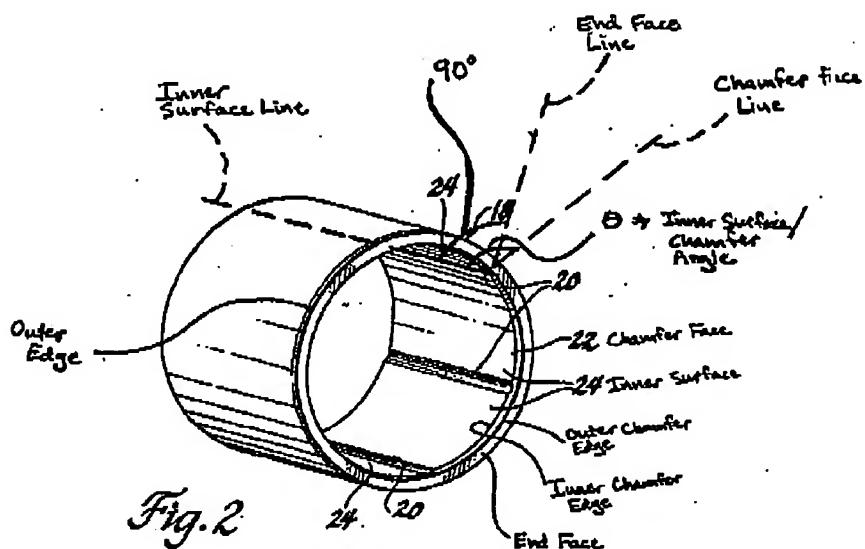


Figure B – Applicant's Marked-up Figure
from the *Johnston* Reference

The chamfer face in *Johnston* cannot be interpreted to be the end face as recited in claim 1 because the chamfer face is not on the end of the bushing 18 and because the chamfer face is not perpendicular with the inner surface 24. It appears that the Examiner has drawn a tangent line along the outer edge of the bushing 18 to indicate that an angle between the inner surface 24 and the outer edge of the bushing 18 is perpendicular. However, this interpretation is inconsistent with claim 1 because claim 1 requires a first surface (the inner surface) to be perpendicular with and terminate at the second surface (the end face). Two surfaces are perpendicular if a line drawn along the first surface is perpendicular with a line drawn along the second surface, as indicated by the inner surface line and the end face line.

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However, two surfaces are not perpendicular with each other merely because a line drawn along the first surface is perpendicular with a line drawn tangent to the arc of the second surface. Under this interpretation, the surface of any object with a radius of curvature, such as a cone, would be interpreted to be perpendicular to the axis of the object. A line drawn tangent to a point on the arc of an edge of the chamfer face does not extend along the surface of the chamfer face, it merely touches the surface at a single point. Therefore, the chamfer face in *Johnston* is not perpendicular to the end face as recited in claim 1.

Furthermore, the end face (labeled above in Figure B) in *Johnston* does not anticipate the end face as recited in claim 1 because the end face in *Johnston* does not cooperate with the inner surface 24 to define an edge. Rather, the end face in *Johnston* cooperates with the chamfer face to define the outer chamfer edge (labeled above in Figure B) and the inner surface cooperates with the chamfer face to define the inner chamfer edge (labeled above in Figure B).

Additionally, the chamfer face cannot be interpreted to be the secondary edge because it is a surface having a pair of edges rather than an edge defined by two surfaces that terminate at each other.

Therefore, claim 1 is not anticipated by *Johnston*.

Claims 2-7 and 9-14 depend on amended claim 1. Thus, claims 1-7 and 9-14 are allowable for the reasons provided above.

Claim 15 recites that the inner surface terminates at an end face of the pinion and that the inner surface and the end face define a secondary edge having an angle of less than or equal to 90 degrees. Therefore, claim 15 recites that a first surface (the inner surface) and a second surface (the end face) are generally perpendicular and cooperate to define an edge.

As shown in Figure B above, the inner surface 24 and the chamfer face in *Johnston* form an inner surface/chamfer face angle θ that is substantially not perpendicular. Therefore, the chamfer face in *Johnston* cannot be interpreted to be the end face as recited in claim 15.

Furthermore, the end face in *Johnston* does not anticipate the end face as recited in claim 15 because the end face in *Johnston* does not cooperate with the inner surface 24 to define an edge. Rather, the end face in *Johnston* cooperates

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with the chamfer face to define the outer chamfer edge and the inner surface cooperates with the chamfer face to define the inner chamfer edge.

Additionally, the chamfer face cannot be interpreted to be the secondary edge because it is a surface having a pair of edges rather than an edge defined by two surfaces that terminate at each other.

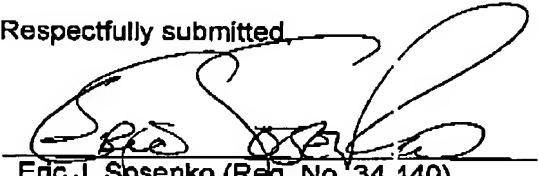
Therefore, claim 15 is not anticipated by *Johnston*.

Claims 16, 17, 19-21, and 34 depend on amended claim 15. Thus, claims 15-17, 19-21, and 34 are allowable for the reasons provided above.

Conclusion

In view of the above remarks, it is respectfully submitted that the present form of the claims are patentably distinguishable over the art of record and that this Application is now in condition for allowance. Therefore, Applicants request that the Examiner grant early allowance of these claims. The Examiner is invited to contact the undersigned attorney for the Applicants via telephone number (734) 302-6000, if such communication would expedite this Application.

Respectfully submitted,



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